

**Abstract of the Disclosure**

A method and apparatus for providing optical 3R regeneration involving: 1) generating an encoded optical clock signal from at least an optical signal; 2) introducing 5 the encoded clock signal into a delay interference section of a regenerator such that an amplitude modulated clock signal is produced; and outputting the amplitude modulated clock signal wherein the output amplitude modulated clock signal preserves information present within the input optical signal.

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